

**AMENDMENTS TO THE DRAWINGS**

Please substitute the enclosed Fig. 9 for the original Fig. 9 filed with the application.

### **REMARKS**

The non-final Office Action states that claims 1-6 are pending of which claims 1-4 are allowed and claims 5 and 6 are withdrawn from consideration. However, Applicants submit claims 1-10 are pending as discussed below. In this Response, claims 1-10 have been amended and no claims have been added or cancelled. Thus, claims 1-10 are pending in the application.

Applicants invite the Examiner to call Applicants' Representative to discuss any issues with this application.

### **Drawing Objections**

The Office Action objects to Fig. 9 as not being label "Prior Art."

In response, Applicants submit the enclosed replacement sheet of drawing for Fig. 9 which includes the label "Prior Art." No other changes have been made to Fig. 9. The enclosed replacement sheet of Fig. 9 is a formal drawing.

Thus, Applicants submit the drawing objection has been overcome.

### **Information Disclosure Statement**

The Office Action states at page 2 that the Information Disclosure Statement (IDS) is missing. However, Applicants submitted an IDS on June 23, 2005. A copy of the IDS transmittal, IDS, and PTO Form 1449 are enclosed. Also enclosed is a copy of the post card submitted with the IDS which has been stamped by the USPTO acknowledging receipt of the documents submitted with the IDS. If the Examiner requires another copy of the foreign patent documents cited in the IDS, Applicants will submit another copy of the references upon request by the Examiner. The Examiner is invited to call Applicants' representative if copies of the cited documents are needed.

### **Claim Objections**

In the Office Action at page 2, claims 5 and 6 were objected to under 37 CFR §1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiple dependent claim.

A Preliminary Amendment was submitted with the filing of the present application. The Preliminary Amendment corrected the improper multiple dependencies by changing the dependencies of claims 5 and 6 and adding claims 7-10. A copy of the Preliminary Amendment is enclosed. Therefore, Applicants submit the claims are in proper form.

Thus, Applicants submit the claim objections should be withdrawn.

### **Allowable Claims**

The Office Action at page 2 states that claims 1-4 are allowed. Applicants thank the Examiner for the notice of allowable claims.

The Preliminary Amendment amended claims 1-6 and added dependent claims 7-10. The claim amendments and new claims in the Preliminary Amendment removed reference numbers and corrected improper multiple dependencies. In this Response, claims 1-10 have been amended replace the phrase “characterized in that” with “wherein.” Thus, Applicants submit claims 1-10 are allowable.

### **Title and Specification**

The Preliminary Amendment also amended the title of the application and the specification. A copy of the Preliminary Amendment is enclosed for the Examiner’s reference.

**CONCLUSION**

For the foregoing reasons, Applicants submit that the patent application is in condition for allowance and request a Notice of Allowance be issued.

Respectfully submitted,

EVEREST INTELLECTUAL PROPERTY LAW GROUP

Date: May 24, 2006

BY



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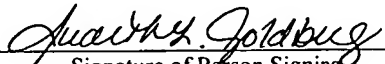


**IN THE UNITED STATES ELECTED/DESIGNATED OFFICE  
OF THE UNITED STATES PATENT AND TRADEMARK OFFICE  
UNDER THE PATENT COOPERATION TREATY**

In Re Patent Application Of: )  
Kazuo SHIRAKAMI and )  
Masaaki SUGIYAMA )  
For: LEAD AIR CONTROL DEVICE OF )  
STRATIFIED SCAVENGING TWO- )  
CYCLE ENGINE )  
Serial No.: Not yet assigned )  
Filed: February 17, 2005 )  
Examiner: Not yet assigned )  
Art Unit: Not yet assigned )  
Conf. No. Not yet assigned )

**CERTIFICATE OF EXPRESS MAILING**

I hereby certify that this paper is being deposited with the United States Postal Service as Express Mail Post Office to Addressee, with sufficient postage, under 37 C.F.R. § 1.10 and addressed to: MAIL STOP PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 17, 2005.

  
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ED381303016US  
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**PRELIMINARY AMENDMENT**

MAIL STOP PCT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Please amend the above-identified International Application before entry into the National Stage before the U.S. Patent and Trademark Office under 35 U.S.C. §371.

Applicants invite the Examiner to call Applicants' Representative to discuss any issues with this application.

**Amendments to the Specification** begin on page 2 of this Preliminary Amendment.

**Amendments to the Claims** begin on page 3 of this Preliminary Amendment.

**Remarks** begin on page 6 of this Preliminary Amendment.

**AMENDMENTS TO THE SPECIFICATION**

Please amend the title of the application to read as follows:

LEAD AIR CONTROL ~~DEVICE~~ APPARATUS OF STRATIFIED SCAVENGING TWO-  
CYCLE ENGINE

Please replace the paragraph beginning at page 20, lines 2-10 with the following rewritten paragraph:

Next, an operation is explained. At a top dead center position of the piston 4 shown in Fig. 1, the air-fuel mixture of the air and the fuel is compressed in an upper portion of the cylinder chamber, and is ignited by the spark plug 7, whereby the air-fuel mixture is exploded so as to push down the piston 4. At this time, the scavenging port 10 and the scavenging flow path 12 is filled with a clean air introduced thereto from the air cleaner 32 via the second air passage 24, the first ~~second~~ air passage 23 and the air flow passage 14.

### LISTING OF CLAIMS

This listing of claims replaces all prior versions and listings of claims in the patent application.

Claim 1 (currently amended): A lead air control apparatus of a stratified scavenging two-cycle engine, the stratified scavenging two-cycle engine comprising: a carburetor (30) connected to an air cleaner (32, 32a, 32b) and having a throttle valve (31); an insulator (21) inserted between the carburetor (30) and a cylinder (3) for a purpose of insulating heat; and an intake passage (22) formed in the insulator (21) and connecting between an intake port (13) provided in the cylinder (3) and the carburetor (30), characterized in that

the apparatus comprises:

a pair of first air passages (23, 23) formed in the insulator (21), and respectively connected to a pair of scavenging ports (10, 10) provided in the cylinder (3);

a pair of second air passages (24, 24) respectively connecting between the air cleaner (32, 32a, 32b) and the respective first air passages (23, 23), and arranged in an approximately parallel state; and

air control valves (25, 25) provided in the respective second air passages (24, 24), and controlling an air amount of a lead air for scavenging.

Claim 2 (currently amended): The lead air control apparatus of the stratified scavenging two-cycle engine according to claim 1, characterized in that

the air control valves (25, 25) are provided near the air cleaner (32, 32a, 32b) or are integrally formed with the air cleaner (32, 32a, 32b);

the respective second air passages (24, 24) are provided with connection members (35, 35) respectively connected to the first air passages (23, 23); and

an inner peripheral wall from each of the first air passages (23, 23) to each of the second air passages (24, 24) is formed smoothly and continuously along a length direction of

the air passages.

Claim 3 (currently amended): The lead air control apparatus of the stratified scavenging two-cycle engine according to claim 2, characterized in that a connection portion in an end portion of each of the connection members (~~35, 35~~) is formed such that a change of an internal diameter cross sectional area between the connection portion and a connected portion is small.

Claim 4 (currently amended): The lead air control apparatus of the stratified scavenging two-cycle engine according to claim 2 or 3, characterized in that each of the connection members (~~35, 35~~) has a flexibility.

Claim 5 (currently amended): The lead air control apparatus of the stratified scavenging two-cycle engine according to any one of claims ~~1 to 4~~ 1 to 3, characterized in that the respective first air passages (~~23, 23~~) are arranged so as to be approximately parallel to each other, and each of the first air passages is formed as an approximately linear air passage.

Claim 6 (currently amended): The lead air control apparatus of the stratified scavenging two-cycle engine according to any one of claims ~~1 to 5~~ 1 to 3, characterized in that the respective first air passages (~~23, 23~~) have air flow paths (~~14, 14~~) formed within the cylinder (~~3~~); and

the pair of air flow paths (~~14, 14~~) and the pair of scavenging ports (~~10, 10~~) are arranged so as to be connectable on a same plane.

Claim 7 (new): The lead air control apparatus of the stratified scavenging two-cycle engine according to claim 4, characterized in that the respective first air passages are arranged



so as to be approximately parallel to each other, and each of the first air passages is formed as an approximately linear air passage.

Claim 8 (new): The lead air control apparatus of the stratified scavenging two-cycle engine according to claim 4, characterized in that the respective first air passages have air flow paths formed within the cylinder; and

the pair of air flow paths and the pair of scavenging ports are arranged so as to be connectable on a same plane.

Claim 9 (new): The lead air control apparatus of the stratified scavenging two-cycle engine according to claim 5, characterized in that the respective first air passages have air flow paths formed within the cylinder; and

the pair of air flow paths and the pair of scavenging ports are arranged so as to be connectable on a same plane.

Claim 10 (new): The lead air control apparatus of the stratified scavenging two-cycle engine according to claim 7, characterized in that the respective first air passages have air flow paths formed within the cylinder; and

the pair of air flow paths and the pair of scavenging ports are arranged so as to be connectable on a same plane.

**REMARKS**

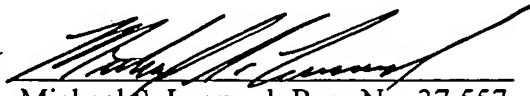
This Preliminary Amendment amends the claims to conform to United States patent practice. No subject matter has been surrendered and no new subject matter has been added. The amendments are for clarification purposes only and are not for substantial or statutory reasons related to patentability.

Respectfully submitted,

EVEREST INTELLECTUAL PROPERTY LAW GROUP

Date: February 17, 2005

BY



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Phone: (847) 272-3400



In re Patent Application  
K. Shirakami et al.

LEAD AIR CONTROL APPARATUS OF STRATIFIED SCAVENGING OF TWO-CYCLE ENGINE  
Serial No. 10/524,904 Filed: 2/17/2005

PATENT  
Dkt. No. 115008-003  
MSL/jlg  
6/23/2005

Enclosures:

1. Transmittal of Information Disclosure Statement (2 pgs. – in duplicate);
2. Information Disclosure Statement (3 pgs.);
3. PTO Form-1449 (1 pg.);
4. Reference (14 Foreign Patents);
5. Postcard: Return Receipt Requested.—



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JC04 Rec'd PCT/PTO 27 JUN 2005

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**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.  
115008-003

In Re Application Of: Kazuo Shirakami et al.

Application No.

10/524,904

Filing Date

February 17, 2005

Examiner

Not yet assigned

Customer No.

43793

Group Art Unit

unknown

Confirmation No.

unknown

Title: **LEAD AIR CONTROL DEVICE OF STRATIFIED SCAVENGING TWO-CYCLE ENGINE**

Address to:  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**37 CFR 1.97(b)**

1. ☒ The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

**37 CFR 1.97(c)**

2. ☐ The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:

☐ the statement specified in 37 CFR 1.97(e);

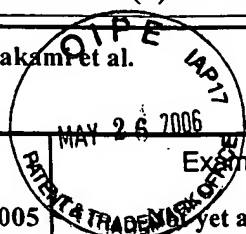
OR

☐ the fee set forth in 37 CFR 1.17(p).

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.  
115008-003

In Re Application: Kazuo Shirakami et al.



Application No. 10/524,904	Filing Date February 17, 2005	Examiner yet assigned	Customer No. 43793	Group Art Unit unknown	Confirmation No. unknown
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Title: LEAD AIR CONTROL DEVICE OF STRATIFIED SCAVENGING TWO-CYCLE ENGINE

**Payment of Fee**

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

- ☐ A check in the amount of \_\_\_\_\_ is attached.
- ☒ The Director is hereby authorized to charge and credit Deposit Account No. 50-3189 as described below.
- ☐ Charge the amount of \_\_\_\_\_
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- ☐ Payment by credit card. Form PTO-2038 is attached.

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June 23, 2005 (Date)	_____ Signature of Person Mailing Correspondence Judith L. Goldberg
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Signature

Dated: June 23, 2005

Michael S. Leonard, Reg. No. 37,557  
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Tel: (847) 272-3400

CC:



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Patent Application of:

Kazuo Shirakami et al.

For: LEAD AIR CONTROL DEVICE OF  
STRATIFIED SCAVENGING TWO-  
CYCLE ENGINE

Serial No.: 10/524,904

Filed: February 17, 2005

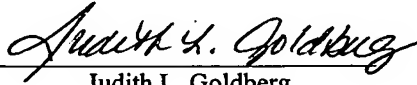
Examiner: Not yet assigned

Art Unit: Unknown

Conf. No.: Unknown

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Judith L. Goldberg

## INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. 1.56, 37 C.F.R. 1.97, and 37 C.F.R. 1.98, Applicants request that a citation and examination of the references cited below, and on the attached PTO-1449 form, be made during the course of examination of the above-identified application for United States patent. Pursuant to the Official Gazette Notice dated August 5, 2003, copies of the cited U.S. patents and patent applications are not included as this application was filed after June 30, 2003. However, copies of all other cited references are included with this form.

U.S. PATENT DOCUMENTS

<u>Document No.</u>	<u>Date</u>	<u>Inventor</u>
4,075,985	Feb. 28, 1978	Iwai
6,289,856 B1	Sep. 18, 2001	Noguchi
6,328,288 B1	Dec. 11, 2001	Gerhardy
6,401,672 B2	June 11, 2002	Raffenberg et al..
6,401,673 B2	June 11, 2002	Linsbauer et al.
6,415,750 B2	Jul. 9, 2002	Rosskamp et al.
6,595,168 B2	Jul. 22, 2003	Araki

6,640,755 B2

Nov. 4, 2003

Araki

**FOREIGN PATENT DOCUMENTS**

<u>Document No.</u>	<u>Date</u>	<u>Country</u>
55-4518	Feb. 01, 1980	JP
9-112365	April 28, 1997	JP
2000-18453	Jan. 18, 2000	JP
2000-186559	July 04, 2000	JP
WO 00/43650	July 27, 2000	PCT
2000-314350	Nov. 14, 2000	JP
2000-328945	Nov. 28, 2000	JP
2001-263073	Sept. 26, 2001	JP
2001-263164	Sept. 26, 2001	JP
2001-263072	Sept. 26, 2001	JP
2002-054443	Feb. 20, 2002	JP
3313373	May 31, 2002	JP
2002-227653	Aug. 14, 2002	JP
2002-535546	Oct. 22, 2002	JP

The cited Japanese references are not in the English language. English language abstracts are attached to JP2002-54443, JP2002-227653, JP2000-328945, JP9-112365 and JP2000-186559. U.S. '985 corresponds to JP55-4518. U.S. '288 corresponds to JP2000-314350. U.S. '673 corresponds to JP2001-263073. U.S. '856 corresponds to JP3313373. U.S. '750 corresponds to JP2001-263072. U.S. '672 corresponds to JP2001-263164. U.S. '168 corresponds to JP 2002-054443. U.S. '755 corresponds to JP2002-227653. WO 00/43650 corresponds to JP2002-535546. JP 2000-328945 is discussed in the specification of the present application. JP2002-054443, JP2002-227653, JP2000-18453, and JP9-112365 were cited in the International Search Report, a copy of which was included with the filing of this application.

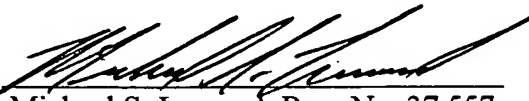
Applicant looks forward to early and favorable consideration of this matter.

Respectfully submitted,

EVEREST INTELLECTUAL PROPERTY LAW GROUP

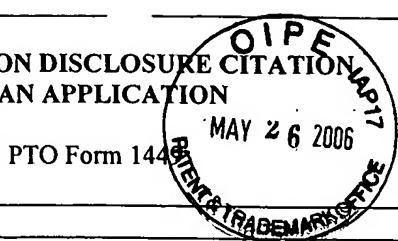
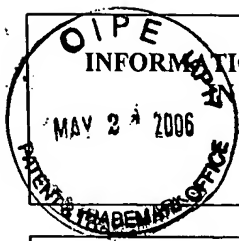
Date: June 23, 2005

BY

A handwritten signature in black ink, appearing to read "Michael S. Leonard", is written over a horizontal line.

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Atty Docket No. 115008003	Application No. 10/524,904
Applicant - Kazuo Shirakami et al.	
Filing Date February 17, 2005	Group Unknown

U.S. PATENT DOCUMENTS							
Examiner's Initials		Document Number	Publication Date	Inventor	Class	Subclass	Filing Date If Appropriate
		4,075,985	Feb. 28, 1978	Iwai			
		6,289,856 B1	Sep. 18, 2001	Noguchi			
		6,328,288 B1	Dec. 11, 2001	Gerhardy			
		6,401,672 B2	June 11, 2002	Raffenberg et al.			
		6,401,673 B2	June 11, 2002	Linsbauer et al.			
		6,415,750 B2	Jul. 9, 2002	Rosskamp et al.			
		6,595,168 B2	Jul. 22, 2003	Araki			
		6,640,755 B2	Nov. 4, 2003	Araki			

FOREIGN PATENT DOCUMENTS								
Examiner's Initials		Document Number	Publication Date	Country	Class	Subclass	Translation	
							Yes	No
		55-4518	Feb. 01, 1980	JP				
		9-11236	April 28, 1997	JP				
		2000-18453	Jan. 18, 2000	JP				
		2000-186559	July 04, 2000	JP				
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		2001-263073	Sept. 26, 2001	JP				
		2001-263164	Sept. 26, 2001	JP				
		2001-263072	Sept. 26, 2002	JP				
		2002-054443	Feb. 20, 2002	JP				
		3313373	May 31, 2002	JP				
		2002-227653	Aug. 14, 2002	JP				
		2002-535546	Oct. 22, 2002	JP				

Examiner's Initials	<b>OTHER DOCUMENTS</b> (Including Author, Title, Date, Pertinent Pages, Etc.)
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Examiner:	Date Considered:
*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	